

CSI Country Wide Case Study Safety Strategy Discussion

Construction Safety Investigator

CHUBB

Instructions:

The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety-related concerns they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety-related exposures.

Case Date:

2018

Accident Type:

Caught In Between Accident

Relevant Laws, Rules, and Codes May Include:

29CFR 1926.20(a)(1); 29 CFR 1926.20(b)(2); 1926.21(b)(2); SHIB 01-12-2009; DHHS (NIOSH) Publication Number 2011-128

Case:

Caught In Between Skid-Steer Accident

Accident Detail:

A 36-year-old male skid-steer (track loader) operator was caught between the cab and lift arms. The operator worked for the employer for approximately one year and had been operating a skid-steer for seven months.

The operation related to installation of helical piers; foundation support anchors had been completed. The operator stepped outside of the cab, leaving the skid-steer running while attempting to release the pressure from the pin connecting the skid-steer's helical head attachment (which drives the helical pier to appropriate depth) to the installed helical pier.

He positioned himself in front of the cab and in between the lift arms' front frame rail cross member while continuing to control the skid-steer.

A hydraulic hose that had been wrapped around the right control lever of the skid-steer pulled the control lever forward, and when the operator pulled the safety bar down the right lever was engaged, causing the lift arms to lower and crush the operator.

The operator was pronounced dead at the scene.

Reconstructive Safety Evaluation:

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident?

Accident Scene Conclusion:

- Documents and interviews revealed that the helical pier hydraulic head attachment was fabricated by the employer. It was noted that a thread bolt used to stabilize the attachment was worn and bent, and hydraulic hose sleeves were worn.
- Documents were not provided on the limits and specifications of the helical pier hydraulic head attachment.
- A review of the manufacturer’s skid-steer equipment manual revealed the following statements:
 - “Consult with manufacturer before installing an optional attachment,” and
 - “Do not use attachments that have not been approved by manufacturer. Doing so may compromise safety or adversely affect the machine’s operation or service life.”
- According to interview documents, the skid-steer manufacturer was not consulted in the design or approval of the attachment, nor was the attachment certified by an engineer.
- Additionally:
 - The operator was operating the skid-steer from outside the cab and bypassing a safety feature.
 - The manufacturer’s instructions were not followed.
 - There was inadequate knowledge of hazards as well as inadequate training and communication.

Preventive Safety Measures Include:

- Complete a Job Safety Task Analysis (JSTA) that includes scope of work, anticipated exposures and safety equipment and/or procedures needed to ensure that the task is completed successfully and safely.
- Conduct a pre-work meeting to review the JSTA and ensure that workers understand the task to be completed, any safe working procedures, and have the necessary safety equipment.
- Employees should have adequate training on job-specific tasks. Proper training must extend to all workers, including day laborers. Language barriers and communication should also be considered during training.
 - Employers should train employees to identify hazards, such as caught in/between hazards and methods to mitigate or eliminate hazards.
- Employers should ensure that employees operate a skid-steer only from inside the cab and should not bypass its safety features.
- Employers/employees should review and adhere to equipment manufacturer’s operating manual.
 - The operator exited the cab and positioned himself below the raised lift arms without the use of a support device. NIOSH further recommends that, “If the machine is not equipped with a lift-arm support device or it is damaged, contact the equipment dealer or manufacturer’s representative for help in determining proper support procedures or for replacement parts. Never use concrete blocks or simple metal angle irons because they can shift or collapse under even light loads.”

Attendance Roster:

Reference: NIOSH FACE Program, State FACE Reports, Oregon – Oregon Case Report#: 2018-08-1

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